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ABSTRACT

Designed for use by teachers, librarians, and media specialists, the slide/tape program described presents an introduction to the production and uses of educational slides in the classroom with emphasis on the relative ease of producing and using slides, as compared to other visual media. This paper includes discussions of the reasons for local slide production and the development of this slide/tape program, as well as the content of the program in story board format and a users guide. The slide/tape introduces the physical characteristics and advantages of educational slides, provides tips for producing slides and suggestions for their use, and lists ideas and games incorporating educational slides for classroom use. The program consists of 79 35mm color slides with an accompanying audiocassette tape; the length is 12:25 minutes. A bibliography listing 68 additional sources of information is attached. (CHC)

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EDUCATIONAL SLIDES: FORM & FUNCTION

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ABSTRACT

Bor, Aaron Marc. "Educational Slides: Form & Function." Unpublished Doctor of Education project in lieu of dissertation, University of Northern Colorado, 1977.

"Educational Slides: Form & Function" is a slide/tape program designed for teachers and schools who desire maximum effectiveness from educational slides. It presents an introduction to the production and uses of educational slides in the classroom. The theme of the program revolves around the relative ease of producing and using slides as compared to other visual media. It is ideal for situations where educational slides are desired but talents and ideas are limited.

"Educational Slides: Form & Function" meets the following objectives:

1. Introduces physical characteristics and advantages of educational slides;
2. Gives tips for producing educational slides;
3. Offers suggestions for utilization of educational slides; and
4. Lists ideas and games incorporating educational slides for classroom use.

The physical form of "Educational Slides: Form & Function" consists of seventy-nine 35mm color slides with an accompanying audio cassette tape. The length of the

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program is 12:25 minutes. The program content is divided into six sections that contribute toward meeting stated objectives: introduction, characteristics, production, presentations, uses, and an ending section. The project also includes a Users Guide to accompany the slide/tape.

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CHAPTER I

INTRODUCTION

In the past few decades, technological advances have become quite common in education. A result of this technology are the variety of audio-visual equipment and materials that are used in most schools. These materials cover a wide range of devices from audio tapes to television and self-instructional media machines. Along with this dramatic growth came a barrage of new educational media materials. The concept of individualized instruction and self-paced learning demands audio-visual materials for specific objectives. Therefore, some situations require educational materials which are highly specialized. Due to the relatively small demand for specialized materials, commercial outlets have been slow in providing such materials, and when they do they are usually expensive. Hence, local production of educational materials has become necessary to accommodate the needs of students.

One specific element in educational media that has been a concern of the author is the slide presentation. Because slides are relatively easy and inexpensive to produce, they are an excellent starting point for local

educational media production. Any 35mm or instamatic type camera is capable of photographing color slides. The processing and mounting of slides may also be done by an educational media center, but is usually handled by a commercial photographic laboratory. In fact, the popular audio-visual text, Planning and Producing Audiovisual Materials, lists the following advantages of slides as audio-visual materials:

> 1. require only filming, with processing and mounting by film laboratory;
> 2. result in colorful, realistic reproductions of original subjects;
> 3. prepared with any 35-mm camera for most uses;
> 4. easily revised and up-dated;
> 5. easily handled, stored, and rearranged for various uses;
> 6. increased usefulness with tray storage and automatic projection;
> 7. can be combined with taped narration for greater effectiveness; and
> 8. may be adapted to group or to individual uses.[1]

The Handbook and Catalog for Instructional Media Selection mentions additional advantages of slides as an instructional medium:

> 1. the full range of photographic techniques (stop action, selected depth of field, air brushing, micro-photography, etc.) is available;
> 2. tests may be incorporated into the medium; and

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[1]Jerrold E. Kemp, Planning and Producing Audio-visual Materials (New York: Thomas Y. Crowell, 1975), p. 46.

3. the time spent on each picture can be completely under the instructor's control.[2]

Educational slides are usually thought of as being designed for a complete program, arranged in a fixed sequential order, and capable of accommodating an audio recording. However, slides may also be used effectively as single or two or three group units. Illustrations of tables, graphs, maps, diagrams and sketches photograph with outstanding quality. Groups of slides present factual data which would take too long to write up on a chalkboard.[3] The New York State Educational Department agrees that slides offer many instructional advantages, especially flexibility:

> A major advantage of a slide presentation is its flexibility . . . It may be shown in part or in whole, with varying speeds, or in conjunction with other instructional media.[4]

An added dimension to the flexibility of slides is their usefulness in a variety of subject areas. "Slide collections should be broad in concept and not be limited

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[2]Brian G. Boucher, Merrill J. Gottlieb, and Martin L. Morganlander, Handbook and Catalog for Instructional Media Selection (Englewood Cliffs, New Jersey: Educational Technology Publications, 1973), p. 28.

[3]Michael John Langford, Visual Aids and Photography in Education (New York: Hastings House Publishers, 1973), p. 109.

[4]New York State Education Department, Motivating the Learner: Ideas for Instructors of Consumer-Homemaking Programs, Working With Adults, Educational Research Information Center, ERIC Document ED 055 270, 1971, p. 2.

to a single subject area since the slides tend to have application in more than one discipline."[5] Even in presenting concepts of motion, a domain usually conceded to television or motion pictures, a Purdue University study states:

> . . . [a series of] slides were also more effective than sequential still [paper print] photographs, while there was no significant differences between the effectiveness of motion pictures and slides. . . . A static instantaneous representation, such as a single slide or photograph, does not directly transmit information concerning the direction or speed of motion.[6]

Wells, Van Mondfrans, and Postlethwait, in that same Purdue University study, also conclude that slides are more effective than non-projected stills:

> In the case of sequential still photographs, the subject was required to move his eyes across the page, constantly changing his reference point. When viewing slides, the subject focussed his eyes on one point while slides changed, making the object's change position in each succeeding slide more apparent.[7]

The author is in agreement with the above statements and feels that slides should be utilized more

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[5]Robert M. Diamond, The Development of a Retrieval System for 35mm Slides Utilized in Art and Humanities Instruction, Final Report, Educational Research Information Center, ERIC ED 031 925, March, 1969, p. 14.

[6]Russell F. Wells, Adrian P. Van Mondfrans, and S. N. Postlethwait, The Effectiveness of Three Visual Media in Teaching Concepts Involving Specific Attributes in Independent and Traditional Study Formats, Educational Research Information Center, ERIC ED 062 819, April, 1972, p. 11.

[7]Ibid., p. 11.

frequently in education. It is the intent of this study to present information that would enhance the use of slides for educational and instructional purposes.

CHAPTER II

WHY LOCAL SLIDE PRODUCTION?

Despite their availability for several decades and their educational advantages listed in Chapter I, the instructional usage of slides has been limited and their potential not fully realized. Eleanor P. Godfrey cites a national survey of public schools:

> Of all the available teaching aids, one of the most flexible and easily used is the slide projector. . . . when compared with other equipment in a national survey, this projector was next to last in both incidence and frequency and use. Even in those subject areas where 2"x2" slides are ideally suited for instruction, they are not being fully realized.[8]

While the reluctance of teachers to use audio-visual equipment may be a partial explanation for the relatively low rate of educational slide usage, another factor is the general unavailability of educational slides to teachers.

A prerequisite for using educational slides is the teachers' familiarity with the operation of equipment needed to present the slides. This equipment includes a

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[8] Eleanor P. Godfrey, Audiovisual Programs in the Public Schools, Educational Research Information Center, ERIC Document ED 003 759, June, 1964, p. 26.

slide projector, possibly a tape recorder and a projection screen. Even though many teachers are often quite reluctant to confront machines, most soon find that the operation is quite easily mastered. At that point, the teacher may proceed to use various educational slide programs.

But simply knowing "how" to operate the equipment does not remove all the barriers for many teachers. In a lecture presented at the Vancouver Public Library, Hans Möller mentioned another possible reason for teacher hesitation toward using slides as well as other media.

> It has become very complicated to use media and naturally it confuses many teachers or it scares them. It is believed by some that there <u>is</u> a method you should use, and a right one.[9]

Möller does not believe in any form of rigid methodology.

> . . . <u>each</u> teacher should develop her own methods, suited to the particular group of students in front of her, and suited to the present mood of the class.[10]

Although Möller does not adhere to any formal method of presentation, Brown, Lewis and Harcleroad outline a basic utilization plan for teachers to consider when presenting educational media:

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[9]Hans Möller, <u>Use of Visual Media In Schools</u>, Educational Research Information Center, ERIC Document ED 053 557, March, 1971, pp. 5-6.

[10]Ibid., p. 6.

1. Prepare Yourself. Preview the media program or study available guides which may accompany the materials. Develop a plan for using the materials.
2. Prepare the Environment. Arrange the equipment, room setting and materials for the presentation.
3. Prepare the Class. Introduce the item and tell the class what is expected of them during and after the presentation.
4. Use the Item. Present the materials properly (focus, audio levels, lighting, etc.).
5. Follow Up. Review the experience with a test or class discussions.[11]

A basic utilization plan may increase the chances for an effective slide presentation but does not guarantee their success in teaching the information. As in the case of many printed materials, slide programs are frequently outdated or inconsistent with specific lesson objectives. Even with the number of slide program production sources available, the "perfect" slide program for the defined needs may be difficult to acquire. Three basic reasons are expense, generalized content, and the poor availability of reference and evaluative sources as compared with other educational media, specifically filmstrips. Let us examine these three factors:

1. Media packages are expensive. The cost must cover not only the raw materials, but also the ideas and professional talents of the production companies. The price of purchasing

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[11]James W. Brown, Richard B. Lewis, and Fred F. Harcleroad, AV Instruction: Technology, Media and Methods (New York: McGraw-Hill Book Company, 1973), pp. 23-4.

a slide program usually exceeds the cost of a comparable reference book. There are rental libraries for motion pictures which may ease the expense somewhat, but rental slide libraries are scarce.

2. Since most media production sources distribute materials throughout the country, the information is usually quite generalized for most classroom needs. A slide program available for a unit on the "Problems of the Cities" might offer much worthwhile information but relatively little that emphasizes facts to meet the specific needs of Denver. In this case, the teacher could optimally use only certain portions of the slide program that would meet his/her needs. Since slide programs are often promoted as a professionally planned package to be used in toto, many teachers hesitate to break up that fixed package to use only a few selected slides. This habit limits the use of selected slides as a resource to meet specific instructional objectives.
3. As stated above, there are sources such as film libraries available to aid the teacher

in selecting motion pictures. However, other than personal or school collections, slide libraries are virtually non-existent. A review of a popular source for educational media materials reveals no index for educational slides. The National Information Center for Educational Media (NICEM, 1973) publishes guides for motion pictures, filmstrips, audio tapes, video tapes, records, and overhead transparencies. However, they do not publish a guide specifically for slides!

Because of the large expense of slide programs or packages, their generalized content, and the lack of available resources, the use of commercial slides is less than ideal in some areas. Furthermore, these problems tend to result in a negative attitude on the part of the teacher toward using educational slides.

Three problems or questions now seem more clearly in focus and their solutions or answers more likely to be appropriate:

1. How can educational slide programs be utilized as part of the learning process when materials have limited availability? An immediate solution is to produce your own materials. What the production will lack in professional

"slickness," it should more than make up for in relevancy and usability.

2. How can a teacher learn how to produce slide materials? Most teachers do not realize the potential of the simple instamatic type camera. It is no longer true that quality slides are produced only from expensive professional photographic equipment. Many inexpensive and simplified methods of producing slides have been developed for the teachers' convenience.

3. Where do the ideas for using slides in the classroom come from? Many resource books are available which can make slide usage more effective. Cecil Garrison's 1001 Media Ideas for Teachers and Arthur Goodwin's Handbook of Audio-Visual Aids and Techniques for Teaching Elementary School Subjects are but two examples. (See the bibliography section for additional references.)

In light of these problems, the author/producer has decided to prepare a slide-tape program dealing with these questions. "Educational Slides: Form & Function" is a slide-tape program that is intended to break down the fears that many teachers have about producing and

using slides in their classrooms. It will offer ideas for utilization and explain simple, inexpensive methods for producing slide programs.

CHAPTER III

WHY "EDUCATIONAL SLIDES: FORM & FUNCTION"?

The purpose of "Educational Slides: Form & Function" is to provide a slide-tape program that can introduce the teacher or librarian to the characteristics, productions, and usage of educational slides.

For the past few years, the author has been teaching the course "The Use of Media in Education" at Metropolitan State College in Denver, Colorado. The class is composed of future teachers of all levels and former teachers taking classes for Colorado certification. Each semester, the author encounters the same needs from his students: how to operate and utilize audio-visual equipment. Typical remarks at the beginning of class are, "I can't think of any ways to use media in a Junior High class," or "My school doesn't have fancy television equipment, we only have a cassette tape recorder and an old slide projector." A few weeks into the semester they are amazed that they can operate the equipment so easily and that they are capable of producing simple but attractive and usable media materials. Before the semester is completed, nearly everyone is surprised at the ideas

for media usage that have been developed by students. "Educational Slides: Form & Function" will essentially perform some of the same functions as the course: to present information regarding the production and usage of educational slides, and to instill confidence in their use.

The program is intended for teachers, media specialists, and librarians working at all grade levels. Learners who are about to embark on a project to produce their own slides could benefit from the sections on production and uses.

Yet, not all users will profit equally from the program. Four kinds of users might profit the most from this program:

1. The teacher who remains open-minded toward the possibility of revising teaching methods;
2. The teacher who is willing to put additional time and effort into a media project;
3. The teacher who has the desire for slides but lacks ideas for usage; and
4. The librarian who accepts audio-visual materials as valid resources.

"Educational Slides: Form & Function" presents information stressing the simplicity and low cost of producing slide programs. But its major focus will be the

presentation of many ways in which slides may be utilized in educational settings.

In a discussion of educational slides, many related topics deserve mentioning. Although these topics are important elements in fully understanding educational slides, they are not the main concern of this program. The following is a listing of objectives which have merit but are not included in this project.

1. The operation of related equipment, i.e., slide projectors and projection screens.
2. The scripting of slide programs.
3. Advanced technical principles of photography including camera operations and understanding.
4. The theoretical concepts regarding effective utilization of slide presentations.
5. The use of audio tapes to accompany slides.

Listed below are the objectives set forth for the slide-tape program "Educational Slides: Form & Function."

1. Introduce physical characteristics and advantages of educational slides.
2. Give tips for producing educational slides.
3. Offer suggestions for utilization of educational slides.
4. List ideas and games incorporating educational slides for classroom usage.

A review of the literature pertaining to these objectives reveal the largest source of information being the educational media textbook. Most texts are oriented toward general educational media and at most, dedicate only part of a chapter toward educational slides. Two popular educational media texts (Audiovisual Materials by Wittich and Schuller, and AV Instruction: Technology, Media and Methods by Brown, Lewis and Harcleroad) treat slides in conjunction with chapters on still pictures and projectuals. These stills include flat pictures, filmstrips, opaque projection materials and projector use. Typical treatments include a brief description of slides, their characteristics, and slide projection equipment. Other texts such as Planning and Producing Audiovisual Materials (Kemp) go into greater depth on the production techniques for slides.

Another valuable source concerning photographic elements surrounding slides is the vast array of pamphlets published by Eastman Kodak Company. Many of these usually restrict the information to the picture-taking facet of slide production. However, one that is quite complete is the pamphlet Planning and Producing Slide Programs.

Government agencies and universities are another source of slide information. The United States Department of Health, Education, and Welfare offers booklets such as

Designing Good Slides and the Visual Instruction Bureau at the University of Texas publishes booklets like Production of 2"x2" Slides for School Use.

Indiana University produced two 16mm color sound motion pictures concerning educational slides: Photographic Slides for Instruction (1958) and How To Make Handmade Lantern Slides (1947). Both are informative; however, some of the techniques presented are outdated by today's standards. Handmade Lantern Slides, produced by the Ohio State University (1954) is a filmstrip which also is a bit outdated since the use of lantern slides has all but been replaced by 2"x2" slides.

Only a few slide programs with educational slides as the subject are available. Jerrold E. Kemp and Richard B. Lewis have put together the Educational Media Kit distributed by McGraw-Hill Company. The kit includes eighteen sub-kits. Kit number seven deals specifically with 2"x2" slides. The Media Research and Development Department of Arizona State University has produced an excellent sound-filmstrip kit entitled Producing Effective Audiovisual Presentations (1975). This kit has six different filmstrips of which photographic copying is one.

Several periodicals such as Media and Methods and Learning Resources offer a wide range of information on all facets of educational slides. Perhaps the most

valuable of all sources is the magazine published by the Association for Educational Communications and Technology: Audiovisual Instruction.

Most sources listed above deal very lightly with ideas for the use of slides for educational situations. Periodicals such as Audiovisual Instruction and Learning Resources sometimes are helpful in presenting ways of utilizing slides. However, the author was able to uncover only a handful of books that offer suggestions for slide use. 1001 Media Ideas for Teachers (Garrison 1970) and the Handbook of Audio-Visual Aids and Techniques for Teaching Elementary School Subjects (Goodwin 1969) were the most informative.

Since most of the above resources are weak in meeting the objectives of this project, "Educational Slides: Form & Function" was designed to familiarize teachers with the facets of slide use and production spelled out in the formal list of objectives. All precautions were taken to ensure that the program meets these objectives. It is an example of the type of program which may be produced from the information given in the program. With this in mind, the choice of a slide program to present information concerning slide programs was made.

CHAPTER IV

"EDUCATIONAL SLIDES: FORM & FUNCTION"--CONTENT

The final physical form of "Educational Slides: Form & Function" consists of a 12:25 minute slide-tape program and accompanying Users Guide. There are 79 color 35mm full-frame slides arranged in proper sequence in an 80-slide Kodak Carousel tray. The slides were photographed from illustrations drawn on yellow cover stock paper with felt tip pens. The lettering was accomplished by using Chartpak Velvet Touch Lettering. A copy stand with four lamps was used to ensure even illumination. The camera was a Honeywell Pentax Spotmatic with a Takumar 55mm 1.8 lens and an attached HCE + 1 close-up lens. The film was Kodak High Speed Ektachrome daylight color slide film (EH 135) with an ASA of 160. A shutter speed of 1/125 of a second was used with aperture openings between f/4 and f/5.6. The slides were processed by Kodak in Dallas, Texas. The audio was recorded on Scotch magnetic tape and transferred to two BASF Low Noise Extended Range cassette tapes. One cassette has an audible tone and the other an inaudible tone (1000 Hz). The choice

of cassettes will depend on whether the slides will be advanced automatically or manually.

"Educational Slides: Form & Function" contains six basic sections that contribute toward meeting the objectives of the program. Each section is identified to the viewer either by visual implication or word titles. The following is an overview of the slide program and its six sections. Listed is a brief description of each section with its representative features. The names and dates in parentheses refer to resources listed in the bibliography. Only the major resources are mentioned. See the bibliography for more reference materials.

1. Introduction

    1.1 The introduction section is brief and to the point. It conveys the essence of the program to the viewer. It presents the intentions and sets up the guidelines that are followed throughout the program.

2. Characteristics

    2.1 This section deals with both physical characteristics and major advantages of slides.

        2.11 Available image sizes (Langford 1956).

2.12 2"x2" characteristics (Wittich and Schuller 1973).

2.13 Advantages of slides (Dale 1969, Wittich and Schuller 1973).

2.14 Flexibility of slide arrangement in program (Brown, Lewis and Harcleroad 1973, Bachman 1956).

3. Production

3.1 The production section is made up of four subsections.

3.11 General photographic information.

3.111 Basic picture-taking tips (Garrison 1970).

3.12 Copy Work.

3.121 Slides from objects, pictures, or graphic materials (Grapper and Glassgow 1971).

3.122 Ektagraphic Visualmaker (Gardner 1976).

3.123 35mm copy work (Erickson and Curl 1972).

3.13 Titles.

3.131 Uses for titles in slide programs (Kemp 1975).

3.132 Photographing titles (Collart and Wismar 1976).

3.133 Writing or typing directly onto acetate (Langford 1973).

3.134 Making non-photographic slides.

3.14 Editing.

3.141 Editing procedures (Kemp 1975).

3.142 Method for recording collected slides (Sharkey and Emenecker 1974).

3.143 Marking slides with thumb prints (Kemp 1975, Minor and Frye 1969).

4. Presentation.

4.1 This section offers some ideas for the teacher in the presentation of slide programs.

4.11 General considerations (Wittich and Schuller 1973).

5. Uses.

5.1 This section is by no means exhaustive. It merely touches the surface of possible ideas for using slide programs.

5.11 Class trips (O'Harra 1959).

5.12 Audio-visual term reports (Poteet 1970, Cook and McElhiney 1967).

5.13 Teacher trips (Edgerton 1970).

5.14 Slides for textual materials (MacLaren 1970).

5.15 Themes for slide programs (Francombe 1974).

5.16 Organizing a slide library (Chez and Kubiak 1969).

5.17 Slides as a tachistoscope device (Goodwin 1969).

5.18 Slide games (Goodwin 1969).

6. Ending.

6.1 The ending section concludes the slide program with a suggestion for teachers to go out and try their skills by producing their own slide programs. Credit slides end the program.

The accompanying Users Guide consists of illustrated reproductions of the actual slides with the appropriate narration. It also contains additional information where applicable. The Users Guide has three main functions:

1. It provides the user with the appropriate narration for each visual. This is helpful

in the event that the user does not choose to use the accompanying audio tape. It also allows the user to quickly locate any part of the program easily.

2. It provides additional comments that either clarify messages presented in the program or adds information to the program.
3. It includes a section which offers ideas for usage of slides in the classroom that were not part of the program because of space limitations.

Although there are some obstacles to the use of educational slides in the classroom, it is hoped that with proper guidance, teachers will be more likely to see the value of slides as teaching tools after viewing the program. As teachers grow in sophistication in dealing with the mechanics of educational slides, they will become more accepting of and more eager to utilize them.

APPENDIX

"EDUCATIONAL SLIDES: FORM & FUNCTION"

USERS GUIDE

The appendix is a copy of the Users Guide which will accompany each slide-tape program. The Users Guide includes illustrations of the slides in "Educational Slides: Form & Function," the narration, and additional comments related to the information in the program.

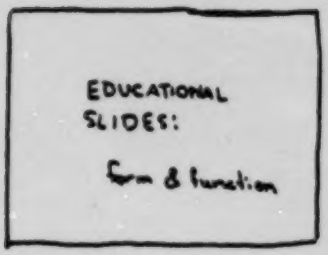
EDUCATIONAL SLIDES: FORM & FUNCTION

USERS GUIDE

This guide is to be used in conjunction with the slide-tape program, EDUCATIONAL SLIDES: FORM & FUNCTION. Its purpose is threefold:

1. It provides the user with the appropriate narration for each visual. This is helpful in the event that the user does not choose to use the accompanying audio tape. It also allows the user to quickly locate any part of the program without having to view the entire program.
2. It provides additional comments which either clarify messages presented in the program or adds information to the program.
3. It includes a section which offers ideas for usage of slide programs in the classroom which were not part of the program because of space limitations.

SLIDE/NARRATION



1

(no narration)

COMMENTS

This slide-tape program was produced in cooperation with the University of Northern Colorado in Greeley, Colorado.

2

The two by two inch slide is a popular media form which has been used in the home,

SLIDE/NARRATION

COMMENTS

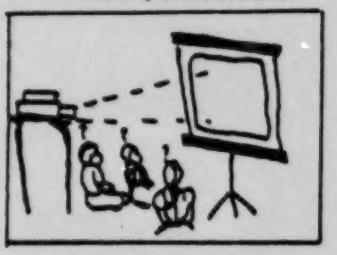
3

and more recently in school settings.

4

Many companies produce slide programs which may be purchased for use in the classroom.

SLIDE/NARRATION



5

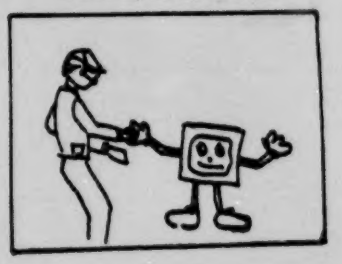
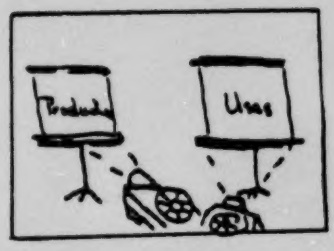
Although the quality of commercial slides is excellent, they often do not meet specific needs of students.

COMMENTS

It is often difficult to obtain a slide program which is suited exactly for the grade, age, and intelligence level of your students. Teachers should omit certain sections of a media program which detracts from the objectives of the lesson.

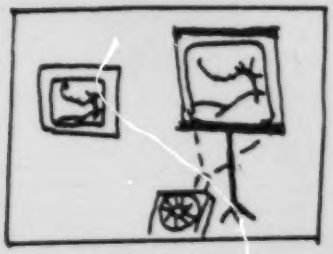
6

But now, with the advent of inexpensive and easy to use cameras, the production of slide programs is easily accomplished by either teachers or students.

SLIDE/NARRATION	COMMENTS
 7 This slide program introduces the teacher to educational slides.	
 8 We will deal with the production of slides and suggest possible ideas for using them in the classroom.	

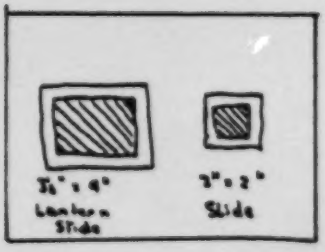
SLIDE/NARRATION

COMMENTS



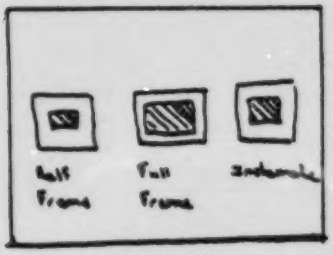
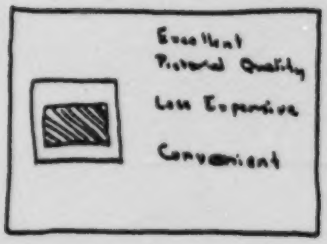
9

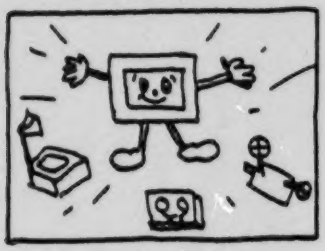
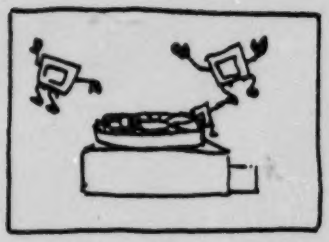
A slide is a small piece of transparent material or film which may be projected on a screen.



10

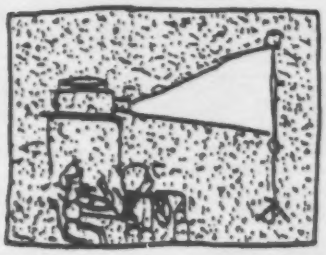
The traditional lantern slide has a three and a quarter by four inch outer dimension. This format has all but been eliminated by the newer two by two inch size.

SLIDE/NARRATION	COMMENTS
 11 The amount of image area is determined by the type camera and film which is used. Most 35mm cameras produce full frame images while others yield an image half the size. Instamatic type cameras result in a square image area.	
 12 The two by two inch slide gives excellent pictorial quality, is less expensive to produce, and is more convenient to work with than the lantern slide.	The 3¼x4-inch lantern slide has more surface area than the 2x2-inch slide. More details may be included but special projectors and mounts are needed. 2x2-inch slides are light and easy to handle and store.

SLIDE/NARRATION	COMMENTS
 13 Slides offer many advantages of other media and some of their own.	Slides are an excellent medium for communicating visual ideas, pictures, graphs or diagrams.
 14 Slides are flexible. Their sequence may be altered simply by adding or dropping desired slides. This allows slide programs to be updated or modified easily.	

SLIDE/NARRATION	COMMENTS
15 The teacher may have complete control over the amount of time spent on each slide.	Even programs which are automatically controlled can be stopped at any slide. The teacher may back up to any previous slide if desired.
16 A slide projected on a large screen may be viewed by the entire class at the same time.	This creates an atmosphere of shared experience.

SLIDE/NARRATION



17

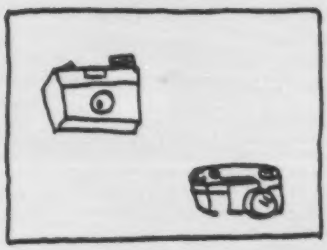
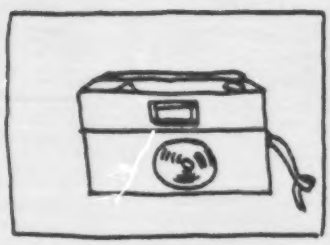
And, the darkened room helps draw attention directly to the screen.

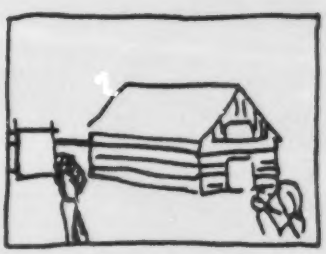
COMMENTS

Magnification gives dramatic intensity and often helps get a message across.

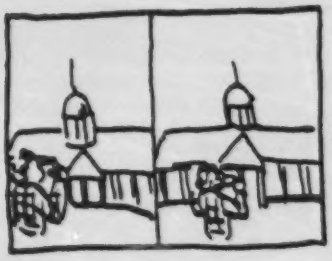
18

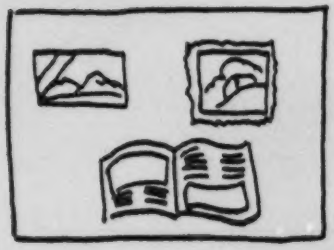
Local production of slides can be easily accomplished.

SLIDE/NARRATION	COMMENTS
 19 Most home still cameras can photograph slides. Just remember to buy slide film instead of print film.	Prints are made using a negative film process. Positive or reversal film is used for slides and are given the "chrome" designation.
 20 Instamatic type cameras are inexpensive and easy to use. They usually require no focusing or manual adjustments.	

SLIDE/NARRATION	COMMENTS
21 Slides can be taken of graphic materials or of real objects. Here are a few tips for taking slides.	An example of photographing an object may be taking slides of an actual building. A slide taken of a picture of that same building from a magazine is copy work. And a slide of that building which is taken from an artist's drawing is a slide from graphic material.
 22 Take more than one shot of important scenes. Use different camera angles and pick out the best.	If possible, shoot with the sun at your back. This eliminates most shadows. A tripod is helpful in steadying the camera but bracing yourself against a steady object such as a doorway works fine.

SLIDE/NARRATION	COMMENTS
23 Take notes of slides for later reference.	Include notes on the subject (i.e., Grand Canyon, North Rim) as well as photographic data (i.e., f/8, 125, ASA 160, 30 feet).
24 Frame your pictures carefully eliminating all distracting information.	Make sure the slide is free from any irrelevant information which may confuse the viewer. There should be a good balance between the artist's technique and the educational needs.

SLIDE/NARRATION	COMMENTS
 25 And, if you know that two copies will be needed, make two originals.	A commercial film processing laboratory can duplicate slides. They can also make slides from photographs.
26 Making a slide of a photograph or drawing is known as copy work.	Obtain permission when using copyrighted materials. When shooting copy work, the minimum focus will be about 20 inches so use a visual 6x7½-inches or larger. With a close up lens a visual as small as 2½x3-3/4-inches may be shot from as close as 6 inches.

SLIDE/NARRATION	COMMENTS
 27 Sometimes it is impossible to photograph real objects. So, use slide copies of resources such as post cards, magazines, books, and photographs. Or, if possible, buy commercial slides.	You may build a library of slides by soliciting slides from students or exchange slides with other schools. It is easy to duplicate slides which you might need in the future.
28 Pictures may be photographed by taping the visual to the wall. Use colored paper to block out unwanted areas.	Using high speed Ektachrome daylight film, the picture can be taped so it is lit from the window. The combination of fluorescent light and the natural sunlight works well. You may use colored paper to block out unwanted areas or mask the slides with tape after it has been mounted.

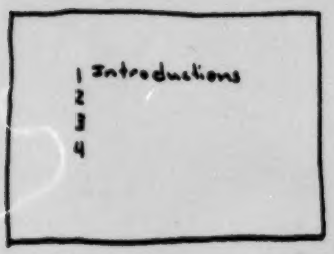
SLIDE/NARRATION	COMMENTS
29 A slide also may be photographed from other projected visual media such as overhead transparencies, filmstrips, motion pictures, or other slides.	Simply project the image on a screen and then photograph. A rear screen projection system works best. Position the camera and projector correctly to eliminate distortion. Then make sure the film type is compatible with the projection lamp.
30 An easy method of doing copy work may be accomplished by the use of a Kodak Ektagraphic Visualmaker.	A visualmaker kit includes an instamatic camera and two sizes of copy stands having built-in close up lenses.

SLIDE/NARRATION	COMMENTS
31 The visual is placed within the copying area and photographed. The result is an instamatic size square slide.	Any copy that fits within the area of the easel may be photographed. There is no need for focus or exposure adjustments.
32 When using a 35mm single lens reflex camera, place the copy on a table and photograph.	Position light sources the same distance from the copy at 45 degree angles. This will assure even lighting. Check lighting with an exposure meter for an even distribution. Support the camera with a tripod and use a shutter release cable so the camera does not move during exposure.

SLIDE/NARRATION	COMMENTS
33 Use non-glare glass to cover the visual and hold it flat.	A single lens reflex camera permits through-the-lens viewing thus the photographer sees the exact area of the picture being photographed.
34 Basically, there are four uses for titles in slide programs.	Often titles are used over pictorial material. If the title is to introduce sections, credits, or for summary purposes, the letters are dominant and the visual secondary. However, when the title is used to direct attention or clarify a visual, the title is secondary and the visual of primary importance.

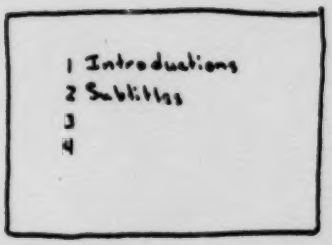
SLIDE/NARRATION

COMMENTS



35

Introductions present the subject to the viewer.

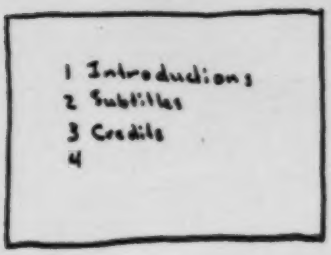


36

Subtitles introduce certain sequences. They also may clarify or emphasize specific points.

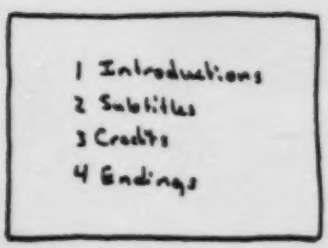
SLIDE/NARRATION

COMMENTS



37

Credits acknowledge individuals who contribute to the production.

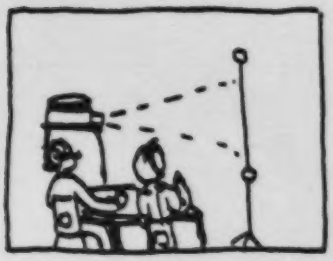


38

And, endings are used to complete the program.

SLIDE/NARRATION

COMMENTS



39

A good rule of thumb is if you can read the slide without a magnifier, the slide should be readable when projected.

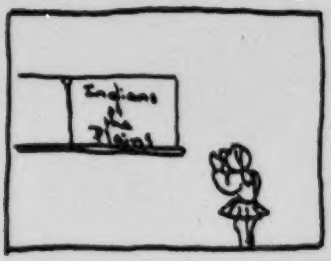
Titles must be simple, complete, and easy to read. Although there are many methods of producing title slides, the following ones are most practical for the classroom teacher.

40

Look for signs or artwork which can be photographed and used as titles.

SLIDE/NARRATION

COMMENTS



41

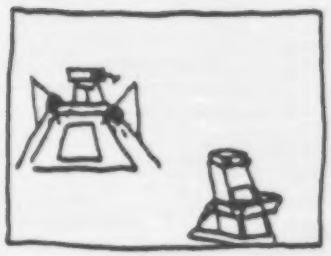
Shoot titles that are written on paper or a chalkboard.

42

Place colored letters on artwork and photograph.

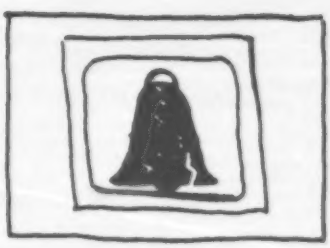
SLIDE/NARRATION

COMMENTS



43

Or, use one of the copy methods mentioned earlier.



44

Not all slides are photographed. Cutouts of thin opaque paper appear as silhouettes when projected.

Sandwich cutout shaped paper between two pieces of glass. Tape the edges of the glass and project. Line drawings are made by using thread or fine wire between glass.

SLIDE/NARRATION	COMMENTS
45 When a simple graphic message is desired, write or type directly onto a matted surface film.	Words on slides should be limited to two or three words per slide. Dry-transfer press-on letters may also be used. When typing, place acetate between two sheets of carbon paper with the coated surfaces inward. Use a clear spray to protect the message.
46 Or, scratch the emulsion from the slide with a pin.	

SLIDE/NARRATION

47

After all slides have been returned and the faulty ones eliminated, it's time to edit the slides.

COMMENTS

If only one or two slides are used, simply hold them up to the light. Or, a simple editing table is made by placing tracing paper between two sheets of glass. Support between two chairs and place a lamp beneath so that it shines upward through the glass.

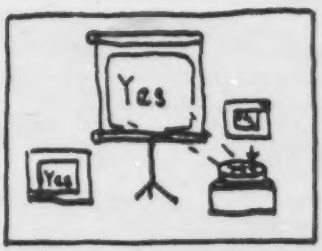
48

Preparing a record of the slide order allows them to be used in other programs.

A slide record may be in the form of a script, storyboard, or a proof sheet of the slides. This allows the presentor to rehearse the program without projecting the images on a screen.

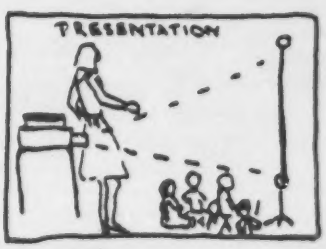
SLIDE/NARRATION

COMMENTS



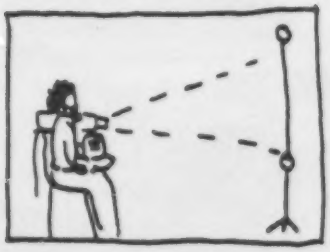
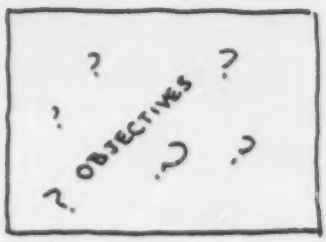
49

A marking should be made in the lower left hand corner of the slide mount. Then, when the slide is placed into a tray, the mark will appear in the upper right hand corner. This avoids upside down or backward slides.



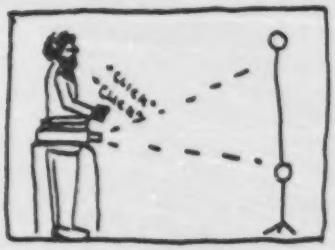
50

There are several considerations when presenting slides.

SLIDE/NARRATION	COMMENTS
 51 Always preview the program before presenting it. This enables the teacher to outline the features.	Previewing the slide program will help the teacher spot new or difficult concepts which should be clarified. Don't surprise the students with new complicated materials.
 52 The pace of presentation depends upon the objectives of the program.	

SLIDE/NARRATION

COMMENTS



53

For instance, a slide program used as an introduction or review, may have a fairly rapid pace.

54

But if the objective is for class discussion, the pace may be dictated by the student's response.

SLIDE/NARRATION

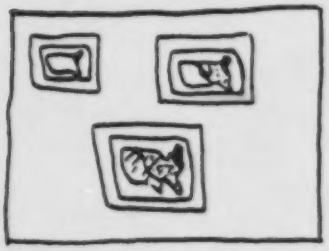
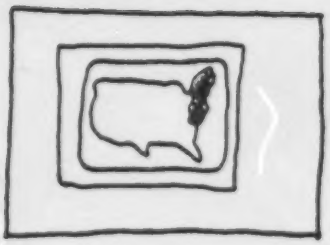
COMMENTS

55

A practical demonstration of the concepts presented is recommended whenever possible.

56

(No narration)

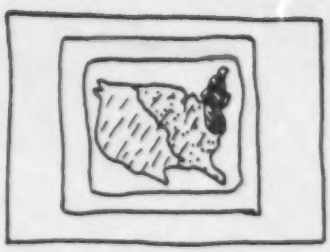
SLIDE/NARRATION	COMMENTS
 57 The progressive disclosure technique reveals additional bits of information with each slide.	Prepare each slide individually with one additional piece of information on each successive slide. Project the slides in sequential order.
 58 (no narration)	

SLIDE/NARRATION

COMMENTS

59

(no narration)



60

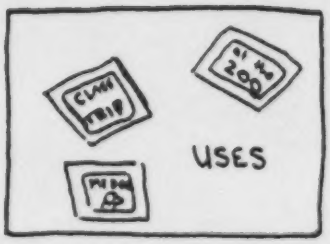
(no narration)

SLIDE/NARRATION

COMMENTS

61

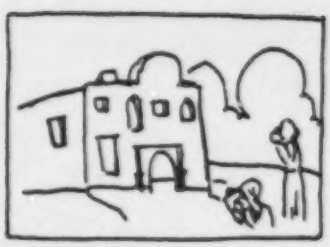
Class discussions of the material in the slide program usually is an excellent follow-up activity.

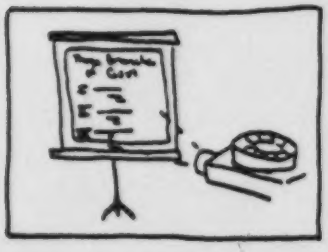


62

The number of ways slides can be used in the classroom is unlimited. However, here are a few suggestions.

SLIDE/NARRATION	COMMENTS
63 Slides prepare students for experiences which they are about to encounter. They make visits more valuable and interesting.	Slide programs may be used when class trips are not feasible. Or, if a field trip is planned, slides may give the students an idea of what to expect.
64 Take slides on class trips, they sometimes bring out points which were missed during the visit.	

SLIDE/NARRATION	COMMENTS
65 The audio visual term report allows the student to present information with visual emphasis.	Get students started by showing a sample AV term report. The topic must be conducive to pictorial presentation. Illustrative presentations or step by step demonstrations are good materials for slide programs.
 66 Take slides of teacher trips keeping a record for identification and reference.	Purchase all film beforehand and process together for uniform colors. Keep film dry and cool until processing.

SLIDE/NARRATION	COMMENTS
 67 Use slides for textual material typing on white paper and photographing with high contrast negative film.	Using a typing matrix allowing for borders.
68 Some possible themes for slide programs include locations, people, and various activities.	Possible themes: 1. colors--significance in life and emotional impacts, 2. textures and shapes, 3. people--clothes and jobs, 4. locations--impressions of areas, 5. contrasts--select parts of entire situations, old and new, etc.

SLIDE/NARRATION

COMMENTS

69

A slide series may be used as a tachistoscope device for reading. Flash symbols, words, situations, or objects on the screen at a predetermined rate.

70

Show a series of slides and then have your students rearrange them to form a story.

SLIDE/NARRATION	COMMENTS
71 Use slides of different objects to play a Bingo game. Association development will occur as students match the slides with the printed words on their individual cards.	
72 The technique of writing paragraphs may be strengthened by flashing one or two slides and then allowing time for the students to write small paragraphs describing the slides.	

SLIDE/NARRATION

COMMENTS

73

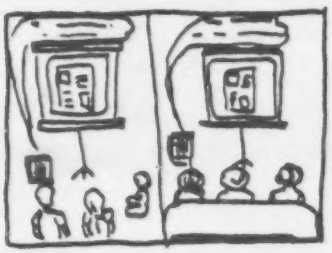
Illustrate a book on slides. Have half the class write a story and the other half find or draw visuals.

74

Or, take the slides first and have the others write a story to the slides.

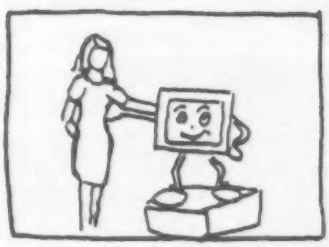
SLIDE/NARRATION

COMMENTS



75

Have more than one narration for each set of slides. Narrations may be for different grade levels or offer different points of view on the same subject.



76

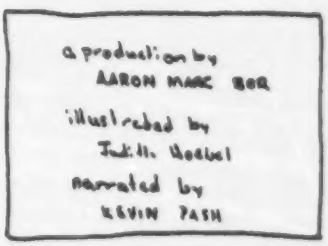
Now that you have been introduced to the production of slides and a few ideas on how they may be used,

SLIDE/NARRATION

COMMENTS

77

pick up a camera and start producing
your own Educational Slides.



78

(no narration)

SLIDE/NARRATION

COMMENTS

79

(no narration)

ADDITIONAL IDEAS FOR SLIDES

Use theatrical gelatin which is soluble in water for artistic designs. Roughly cut the gelatin and place on a glass slide. Wet the gelatin with a brush and quickly cover with another glass slide. Tape the edges and put into the projector. The heat of the projector will melt the gelatin into weird shapes. When you are satisfied with your design, remove the slide from the projector and allow to dry completely.

Apply bleach or ammonia onto the emulsion (dull) side of the slide and watch the chemical reaction to the various colors. Then heat the slide over a candle until your desired design results. Allow to settle and project.

If your camera is capable of photographing double exposures, shoot the subject and then a second subject without advancing the film. This method is excellent for title slides over a visual.

Use Kodacolor print film to photograph a number of various scenes. Then have the film processed as a color negative. The colors will turn out as their complements. That is, yellows will be blue, and reds will be blue-green. Many interesting effects will result in this process. Make sure the film is not printed but returned uncut in a roll. Then mount the negatives and project.

BIBLIOGRAPHY

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Bachman, John W. How To Use Audio-Visual Materials. New York: Association Press, 1956.

Balthaser, Ken, and Stuelpe, Herb. "What This Country Needs is a Good Nickel Transparency." Audiovisual Instruction, September, 1976, 16-7.

Bell, Morlin. "Focusing on Art." Audiovisual Instruction, September, 1971, 64-5.

Boucher, Brian G.; Gottlieb, Merrill J.; and Morganlander, Martin L. Handbook and Catalog for Instructional Media Selection. Englewood Cliffs, New Jersey: Educational Technology Publications, 1973.

Brown, James W.; Lewis, Richard B.; and Harcleroad, Fred F. AV Instruction: Technology, Media and Methods. 4th ed. New York: McGraw-Hill Book Company, 1973.

Campbell, Charles E., and Trooien, Carl. "An Easy Production Method for Filmstrips and 2x2 Slides." Audiovisual Instruction, January, 1970, 81-3.

Caucett, Allen. "Saying It With Slides." Todays Education, May, 1973, 55.

Chez, Ronald A., and Kubiak, Ronald J. "Organizing a Medical School's Slide Collection." Audiovisual Instruction, October, 1969, 121.

Collart, Marie E., and Wismar, Beth L. "Make Perfect Slide Captions Every Time." Audiovisual Instruction, September, 1976, 13-5.

Coltharp, Joe. Production of 2"x2" Slides for School Use. Austin, Texas: Visual Instruction Bureau, University of Texas, 1958.

Cook, Robert I., and McElhiney, Paul. "The Audiovisual Term Report." Audiovisual Instruction, September, 1967, 696-8.

Dale, Edgar. Audiovisual Methods in Teaching. 3rd ed. New York: The Dryden Press, 1969.

Dennis, Donald A. "Preproduction Planning: Key to Successful Slide Shows." Audiovisual Instruction, May, 1965, 401.

Diamond, Robert M. The Development of a Retrieval System for 35mm Slides Utilized in Art and Humanities Instruction, Final Report. U.S., Educational Resources Information Center, ERIC Document ED 031 925, March, 1969.

Eastman Kodak. New Adventures in Outdoor Color Slides. Publication No. AE-9. Rochester, New York: Eastman Kodak Company, 1967.

_____. Kodak Data Book on Slides. 4th ed. Rochester, New York: Eastman Kodak Company, 1949.

_____. Slides With A Purpose for Business and Education. Publication No. V1-15. Rochester, New York: Eastman Kodak Company, 1975.

_____. Planning and Producing Slide Programs. Publication No. S-30. Rochester, New York: Eastman Kodak Company, 1975.

_____. Producing Slides and Filmstrips. 4th ed. Publication No. S-8. Rochester, New York: Eastman Kodak Company, 1969.

Eben, Lois E. "Do-It-Yourself Slides." Grade Teacher, April, 1970, 96-7.

Edgerton, Wilbert D. "Europe on One Roll of Film a Day . . . Photographic Suggestions for the Educator Traveling Abroad." Audiovisual Instruction, March, 1970, 99-101.

_____. "Three Simplified Methods for Producing 35mm Slide Titles." Audiovisual Instruction, September, 1968, 732-4.

Erickson, Carlton W. H. Administering Instructional Media Programs. New York: The Macmillan Company, 1968.

Erickson, Carlton W. H., and Curl, David H. Fundamentals of Teaching with Audio Visual Technology. 2nd ed. New York: The Macmillan Company, 1972.

Erickson, Don G. "Easy, Inexpensive Slide Duplication." Audiovisual Instruction, February, 1972, 76.

"Fast Title Slides For a Penny." Audiovisual Instruction, November, 1975, 34.

Fitzharris, Joseph; Wright, Scott; and Tonra, Robert. "Slide-Sound Projects in History Classes." Audiovisual Instruction, November, 1973, 14-5.

Francombe, Anthony. "The Production of Tape/Slide Sequences." Educational Media International, 1974, no. 2, 24-31.

Gardner, C. Hugh. "Making the Most of Your Visualmaker." Audiovisual Instruction, March, 1976, 48-53.

Garrison, Cecil. 1001 Media Ideas for Teachers. 2nd ed. Berkeley, California: McCutchan Publishing Corporation, 1970.

Godfrey, Eleanor P. Audiovisual Programs in the Public Schools. U.S., Educational Resources Information Center, ERIC Document ED 003 759, June, 1964.

Goodwin, Arthur B. Handbook of Audio-Visual Aids and Techniques for Teaching Elementary School Subjects. West Nyack, New York: Parker Publishing Company, 1969.

Gordon, Anitra. "Pictures Into Slides." Media and Methods, May, 1973, 63.

Grapper, George L., and Glassgow, Zita. Criteria for the Selection and Use of Visuals in Instruction: a handbook. Englewood Cliffs, New Jersey: Educational Technology Publications, Inc., 1971.

Hall, Neal. "Adding Impact to 35mm Slides." Audiovisual Instruction, May, 1975, 57.

Haney, John B., and Ullmer, Eldon J. Educational Media and the Teacher. Dubuque, Iowa: Wm. C. Brown Company, Publishers, 1970.

Harper, Grady. "Making Transparent Slides." The Instructor, January, 1967, 115.

Hedin, Duane E. "Changing the Image Shape of 35mm Slides." Audiovisual Instruction, November, 1975, 40.

How To Make Handmade Lantern Slides. 16mm, motion picture, sound, color, 21 minutes. Bloomington, Indiana: Indiana University, 1947.

Kemp, Jerrold E. Planning and Producing Audiovisual Materials. 3rd ed. New York: Thomas Y. Crowell, 1975.

Kinder, James S. Using Instructional Media. New York: D. Van Nostrand Company, 1973.

Kirman, Joseph M. "Producing Your Own Social Studies Study Prints and Slides." Audiovisual Instruction, April, 1973, 68-71.

Kolmos, Alfred S. Effects of Instructional Media in Teaching Beginning Statistics in a Teacher Education Program, Final Report. U.S., Educational Resources Information Center, ERIC Document ED 053 552, August, 1969.

Kuo, Frank F. "Creating Visuals for a Multi-Screen Presentation." Audiovisual Instruction, September, 1972, 83-5.

Langford, Michael John. Visual Aids and Photography in Education. New York: Hastings House Publishers, 1973.

Lehman, Frederick M. "Creative Techniques for Exciting Slides." Audiovisual Instruction, December, 1957, 264-5.

Lewis, Phillip. "Latest Slide-Making Aids Break Usage Bottleneck." Nations Schools, November, 1968, 80-90.

MacLaren, Grant E. "A Method for Producing 35mm Slides of Teacher-Authorized Textual Materials." Audiovisual Instruction, April, 1970, 101-3.

Marshall, Sally J. "School Paintings." School Arts, February, 1972, 62.

Minor, Ed, and Frye, Harvey R. Techniques for Producing Visual Instructional Media. New York: McGraw-Hill Book Company, 1969.

Möller, Hans. Use of Visual Media In Schools. U.S., Educational Resources Information Center, ERIC Document ED 053 557, March, 1971.

New York State Education Department. Motivating the Learner: Ideas for Instructors of Consumer-Homemaking Programs, Working With Adults. U.S., Educational Resources Information Center, ERIC Document ED 055 270, 1971.

O'Harra, Edwin A. "Slides for Slow Learners." Audiovisual Instruction, February, 1959, 52-3.

Patrie, Milton I. "Make Your Own 2x2 Slides." Educational Screen and Audiovisual Guide, November, 1961, 597-8.

Photographic Slides for Instruction. 16mm, motion picture, sound, color, 11 minutes, Bloomington, Indiana: Indiana University, 1958.

Popham, W. James. "Picture Embellishments in a Tape/Slide Instructional Program." AV Communication Review, Spring, 1969, 28-35.

Poteet, G. Howard. "Getting to See 'Homer Price.'" Audiovisual Instruction, November, 1970, 38-9.

Pula, Fred John. Application and Operation of Audiovisual Equipment in Education. New York: John Wiley and Sons, Inc., 1968.

Rutt, David. "Titling for Slide Presentations." Learning Resources, May, 1974, 2-3.

Ryan, Mack. "Preparing a Slide-Tape Program: A Step-By-Step Approach--Part I." Audiovisual Instruction, September, 1975, 36-43.

_____. "Preparing a Slide-Tape Program: A Step-By-Step Approach--Part II." Audiovisual Instruction, November, 1975, 36-9.

Schwenk, Jörg. "The Production of a Slide-Tape Sequence." Educational Media International, 1974, no. 2, 3-6.

Scurzo, Herbert E. The Practical Audio-Visual Handbook for Teachers. West Nyack, New York: Parker Publishing Company, 1967.

Sharkey, Arthur P., Jr., and Emenecker, Richard H. "Rehearsing a Slide Presentation Without a Projector." Learning Resources, May, 1974, 12-3.

Snowberg, Richard Lee. "Bases for the Selection of Background Colors for Transparencies." AV Communication Review, Summer, 1973, 191-208.

U.S. Department of Health, Education, and Welfare. Designing Good Slides. Washington, D.C.: Government Printing Office, 1971.

Wells, Russell F.; Van Mondfrans, Adrian P.; and Postlethwait, S. N. The Effectiveness of Three Visual Media in Teaching Concepts Involving Specific Attributes in Independent and Traditional Study Formats. U.S., Educational Resources Information Center, ERIC Document ED 062 819, April, 1972.

Wittich, Walter Arno, and Schuller, Charles Francis. Audiovisual Materials: Their Nature and Use. 5th ed. New York: Harper and Row, Publishers, 1973.